



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/552,428	10/07/2005	Douglas John Hughes	282318-00012	6683

3705 7590 10/25/2006

ECKERT SEAMANS CHERIN & MELLOTT  
600 GRANT STREET  
44TH FLOOR  
PITTSBURGH, PA 15219

EXAMINER
----------

KHAN, AMINA S

ART UNIT	PAPER NUMBER
----------	--------------

1751

DATE MAILED: 10/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/552,428

Applicant(s)

HUGHES, DOUGLAS JOHN

Examiner

Amina Khan

Art Unit

1751

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) 11-14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 10/7/2005.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Election/Restrictions*

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1-10, drawn to colorant compositions, classified in class 8, subclass 550.
  - II. Claims 11-14, drawn to methods of dyeing foliage, classified in class 8, subclass 506.

Inventions I and II are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product. See MPEP § 806.05(h). In the instant case the colorant compositions may be used to dye paper or fabrics or other non-foliage based substrates.

Because these inventions are independent or distinct for the reasons given above and there would be a serious burden on the examiner if restriction is not required because the inventions have acquired a separate status in the art in view of their different classification, restriction for examination purposes as indicated is proper.

During a telephone conversation with Arnold Silverman on October 18, 2006 a provisional election was made without traverse to prosecute Invention I, claims 1-10. Affirmation of this election must be made by applicant in replying to this Office action.

Art Unit: 1751

Claims 11-14 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

### ***Specification***

2. The abstract of the disclosure does not commence on a separate sheet in accordance with 37 CFR 1.52(b)(4). A new abstract of the disclosure is required and must be presented on a separate sheet, apart from any other text.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as being anticipated by Kosaka (JP 357008272).

Kosaka teaches inks for ball-point pens comprising humic acid, water and a water-soluble dye (abstract).

Accordingly, Kosaka anticipates the material limitations of the instant claims.

5. Claims 1, 2 and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Hamamoto (JP 361106683).

Hamamoto teaches inks for ball-point pens comprising 0.01-3 wt% humic acid, water and 1-15 wt% water-soluble dye (abstract).

Accordingly, Hamamoto anticipates the material limitations of the instant claims.

6. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Dainichiseika Color & Chemical Manufacturing (JP 05065425).

Dainichiseika Color & Chemical Manufacturing teaches red azo colorant compositions comprising 0.1-5 wt% humic acid, water and soluble azo dye (abstract).

Accordingly, Dainichiseika Color & Chemical Manufacturing anticipates the material limitations of the instant claim.

### ***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Riedel et al. (US 2002/0182234).

Riedel et al. teach compositions comprising 0.001-30% humic acid antioxidants (page 5, paragraph 0054; page 6, paragraph 0057), urea (page 9, paragraph 0110), 0.1-30% dyes such as acid green 1 and acid blue 1 or 62 (page 9, paragraph 0111 and

Art Unit: 1751

table; pages 10 and 11, table; page 13, paragraph 0126), surfactants (page 1, paragraph 0005) and water (page 17, paragraph 0190).

Reidel et al. does not teach all the instantly claimed components in a single composition.

Even though Reidel et al. does not teach a colorant use of his composition, the two different intended uses are not distinguishable in terms of the composition, see *In re Thuau*, 57 USPQ 324; *Ex parte Douros*, 163 USPQ 667; and *In re Craige*, 89 USPQ 393. It would further have been obvious to select the components taught by Reidel et al. to arrive at the instantly claimed invention because Reidel et al. teach all the instantly claimed components as useful in providing effective foaming compositions.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to select the portion of the Reidel et al. range which is within the range of applicant's claims because it has been held to be obvious to select a value in a known range by optimization for the best results. As to optimization results, a patent will not be granted based upon the optimization of result effective variables when the optimization is obtained through routine experimentation unless there is a showing of unexpected results which properly rebuts the *prima facie* case of obviousness. See *In re Boesch*, 617 F.2d 272, 276, 205 USPQ 215, 219 (CCPA 1980). See also *In re Woodruff*, 919 F.2d 1575, 1578, 16 USPQ2d 1934, 1936-37 (Fed. Cir. 1990), and *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955). In addition, a *prima facie* case of obviousness exists because the claimed ranges "overlap or lie inside ranges disclosed by the prior art", see *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA

Art Unit: 1751

1976; *In re Woodruff*, 919 F.2d 1575, 16USPQ2d 1934 (Fed. Cir. 1990). See MPEP 2131.03 and MPEP 2144.05I.

All disclosures of the prior art, including non-preferred embodiment, must be considered. See *In re Lamberti and Konort*, 192 USPQ 278 (CCPA 1967); *In re Snow* 176 USPQ 328 (CCPA 9173). Nonpreferred embodiments can be indicative of obviousness, see *Merck & Co. v. Biocraft Laboratories Inc.* 10 USPQ 2d 1843 (Fed. Cir. 1989); *In re Lamberti*, 192 USPQ 278 (CCPA 1976); *In re Kohler*, 177 USPQ 399. A reference is not limited to the working examples, see *In re Fracalossi*, 215 USPQ 569 (CCPA 1982).

9. Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heidenfelder et al. (US 2003/0118621).

Heidenfelder et al. teach compositions comprising 0.001-30% humic acid antioxidants (page 11, paragraph 0175; page 12, paragraphs 0175-0176), ammonia (page 17, paragraph 0250), 0.1-30% dyes such as acid green 1 and acid blue 1 or 62 (page 21, paragraph 0316 and table; page 22, table, page 24, paragraph 0330), surfactants (page 18, paragraph 0268) and water (page 5, paragraph 0080; page 12, paragraph 0180).

Heidenfelder et al. does not teach all the instantly claimed components in a single composition.

Even though Heidenfelder et al. does not teach a colorant use of his composition, the two different intended uses are not distinguishable in terms of the composition, see

Art Unit: 1751

*In re Thuau*, 57 USPQ 324; *Ex parte Douros*, 163 USPQ 667; and *In re Craige*, 89 USPQ 393. It would further have been obvious to select the components taught by Heidenfelder et al. to arrive at the instantly claimed invention because Heidenfelder et al. teach all the instantly claimed components as useful in providing effective cosmetic compositions.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to select the portion of the Heidenfelder et al. range which is within the range of applicant's claims because it has been held to be obvious to select a value in a known range by optimization for the best results. As to optimization results, a patent will not be granted based upon the optimization of result effective variables when the optimization is obtained through routine experimentation unless there is a showing of unexpected results which properly rebuts the *prima facie* case of obviousness. See *In re Boesch*, 617 F.2d 272, 276, 205 USPQ 215, 219 (CCPA 1980). See also *In re Woodruff*, 919 F.2d 1575, 1578, 16 USPQ2d 1934, 1936-37 (Fed. Cir. 1990), and *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955). In addition, a *prima facie* case of obviousness exists because the claimed ranges "overlap or lie inside ranges disclosed by the prior art", see *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976); *In re Woodruff*, 919 F.2d 1575, 16USPQ2d 1934 (Fed. Cir. 1990). See MPEP 2131.03 and MPEP 2144.05I.

All disclosures of the prior art, including non-preferred embodiment, must be considered. See *In re Lamberti and Konort*, 192 USPQ 278 (CCPA 1967); *In re Snow* 176 USPQ 328 (CCPA 9173). Nonpreferred embodiments can be indicative of



Art Unit: 1751

obviousness, see *Merck & Co. v. Biocraft Laboratories Inc.* 10 USPQ 2d 1843 (Fed. Cir. 1989); *In re Lamberti*, 192 USPQ 278 (CCPA 1976); *In re Kohler*, 177 USPQ 399. A reference is not limited to the working examples, see *In re Fracalossi*, 215 USPQ 569 (CCPA 1982).

10. Claims 3-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kosaka (JP 357008272) as applied to the claims above and further in view of Osada (US 5,993,098).

Kosaka is relied upon as set forth above. Kosaka does not teach the identity of the dyes, the percentages, and compositions comprising surfactants and fertilizers.

Osada, in the analogous art of ball-point pen inks (column 2, lines 40-45), teaches inks comprising water (column 3, lines 10-15), surfactants (column 3, lines 64-67), ammonia (column 4, lines 0-35) and colorants such as Acid Blue 1,9,62 or Acid Green (column 4, lines 45-60).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the inks taught by Kosada by incorporating the colorants, surfactants and ammonia taught by Osada because Osada teaches these ingredients as important in providing ball point pens having less blobbing, vivid color, and no uneven written intensity (abstract). It is prima facie obvious to combine the compounds, each taught for the same purpose, to yield a third composition for that very purpose. *In re Kerkhoven*, 205 USPQ 1069, *In re Pinten*, 173 USPQ 801, and *In re Susi*, 169 USPQ 423 when ingredients are well known and combined for their known properties, the

combination is obvious absent unexpected results. A person of ordinary skill in the pen ink art would expect combinations of these materials to behave in the same fashion as the individual materials, absent unexpected results.

Regarding the percentage limitations, it would have been obvious to optimize the concentrations of the humic acid and colorant to the values instantly claimed because optimization of a result effective variable only requires routine skill in the art.

11. Claims 3-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kosaka (JP 357008272) as applied to the claims above and further in view of Inoue et al. (US 4,545,818).

Kosaka is relied upon as set forth above. Kosaka does not teach the identity of the dyes, the percentages, and compositions comprising surfactants and fertilizers.

Inoue et al., in the analogous art of ball-point pen inks (column 5, lines 50-55), teaches inks comprising water (column 3, lines 10-15), surfactants (column 3, lines 20-30), urea (column 3, lines 5-6) and colorants such as Acid Blue 9 (column 3, line 15).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the inks taught by Kosada by incorporating the colorants, surfactants and ammonia taught by Inoue et al. because Inoue et al. teach these ingredients as important in providing ball point pens having excellent flowability, rapid write ability, and cap-off properties (column 6, lines 45-55). It is prima facie obvious to combine the compounds, each taught for the same purpose, to yield a third composition for that very purpose. *In re Kerkhoven*, 205 USPQ 1069, *In re Pinten*, 173 USPQ 801,

Art Unit: 1751

and *In re Susi*, 169 USPQ 423 when ingredients are well known and combined for their known properties, the combination is obvious absent unexpected results. A person of ordinary skill in the pen ink art would expect combinations of these materials to behave in the same fashion as the individual materials, absent unexpected results.

Regarding the percentage limitations, it would have been obvious to optimize the concentrations of the humic acid and colorant to the values instantly claimed because optimization of a result effective variable only requires routine skill in the art.

12. Claims 3-7,9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hamamoto (JP 361106683) as applied to the claims above and further in view of Osada (US 5,993,098).

Hamamoto is relied upon as set forth above. Hamamoto does not teach the identity of the dyes and compositions comprising surfactants and fertilizers.

Osada, in the analogous art of ball-point pen inks (column 2, lines 40-45), teaches inks comprising water (column 3, lines 10-15), surfactants (column 3, lines 64-67), ammonia (column 4, lines 0-35) and colorants such as Acid Blue 1,9,62 or Acid Green (column 4, lines 45-60).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the inks taught by Hamamoto by incorporating the colorants, surfactants and ammonia taught by Osada because Osada teaches these ingredients as important in providing ball point pens having less blobbing, vivid color, and no uneven written intensity (abstract). It is prima facie obvious to combine the

Art Unit: 1751

compounds, each taught for the same purpose, to yield a third composition for that very purpose. *In re Kerkhoven*, 205 USPQ 1069, *In re Pinten*, 173 USPQ 801, and *In re Susi*, 169 USPQ 423 when ingredients are well known and combined for their known properties, the combination is obvious absent unexpected results. A person of ordinary skill in the pen ink art would expect combinations of these materials to behave in the same fashion as the individual materials, absent unexpected results.

13. Claims 3-7,9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hamamoto (JP 361106683) as applied to the claims above and further in view of Inoue et al. (US 4,545,818).

Hamamoto is relied upon as set forth above. Hamamoto does not teach the identity of the dyes and compositions comprising surfactants and fertilizers.

Inoue et al., in the analogous art of ball-point pen inks (column 5, lines 50-55), teaches inks comprising water (column 3, lines 10-15), surfactants (column 3, lines 20-30), urea (column 3, lines 5-6) and colorants such as Acid Blue 9 (column 3, line 15).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the inks taught by Hamamoto by incorporating the colorants, surfactants and ammonia taught by Inoue et al. because Inoue et al. teach these ingredients as important in providing ball point pens having excellent flowability, rapid write ability, and cap-off properties (column 6, lines 45-55). It is prima facie obvious to combine the compounds, each taught for the same purpose, to yield a third composition for that very purpose. *In re Kerkhoven*, 205 USPQ 1069, *In re Pinten*, 173

Art Unit: 1751

USPQ 801, and *In re Susi*, 169 USPQ 423 when ingredients are well known and combined for their known properties, the combination is obvious absent unexpected results. A person of ordinary skill in the pen ink art would expect combinations of these materials to behave in the same fashion as the individual materials, absent unexpected results.

14. Claims 1-5 and 7-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ayaki et al. (US 5,744,278).

Ayaki et al. teach toner compositions comprising 0.1-15 parts by weight Acid Blue 15 (column 12, line 23; column 13, lines 10-12), ammonia, water (column 13, lines 45-50), and humic acid (column 14, line 21).

Ayaki et al. do not teach all the instantly claimed embodiments in a single example and do not teach the ratio of humic acid to colorant.

It would further have been obvious to select the components taught by Ayaki et al. to arrive at the instantly claimed invention because Ayaki et al. teach all the instantly claimed components as useful in providing effective toner compositions.

All disclosures of the prior art, including non-preferred embodiment, must be considered. See *In re Lamberti and Konort*, 192 USPQ 278 (CCPA 1967); *In re Snow* 176 USPQ 328 (CCPA 9173). Nonpreferred embodiments can be indicative of obviousness, see *Merck & Co. v. Biocraft Laboratories Inc.* 10 USPQ 2d 1843 (Fed. Cir. 1989); *In re Lamberti*, 192 USPQ 278 (CCPA 1976); *In re Kohler*, 177 USPQ 399. A

Art Unit: 1751

reference is not limited to the working examples, see *In re Fracalossi*, 215 USPQ 569 (CCPA 1982).

Regarding the percentage limitations, it would have been obvious to optimize the concentrations of the humic acid and colorant to the values instantly claimed because optimization of a result effective variable only requires routine skill in the art.

### ***Conclusion***

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amina Khan whose telephone number is (571) 272-5573. The examiner can normally be reached on Monday through Friday, 8:30-5.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas McGinty can be reached on (571) 272-1029. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1751

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Amina Khan, PhD  
Patent Examiner  
October 22, 2006

  
LORNAM DOUYON  
PRIMARY EXAMINER